treated in such a way as only to present to it the water of crystallization.

The extraordinary forces of adherence, &c., of the Paris plaster, enables the work on ceilings or partitions to be executed with far less expense of lathing than similar works executed with our lime and hair. Rondelet made experiments to ascertain the limit of these forces, and he obtained the following results:—A parallelopipedon of plaster, with a base measuring 1 inch each way, supported a weight of 76 lbs., acting so as to tear it asunder: this he called the force of adhesion. Similar figures resisted a crushing weight of 789 lbs.; so that the ratio of the resistance of plaster to an effort of traction, compared to one of extension, is as 1-9½. * * * *

The usual practice in Paris is to execute the work intended to be plastered with rubble stone, set in plaster mortar. If possible, the principal elevations are executed in ashlar: externally, plaster is never used if it can be avoided, for its use requires care and numerous precautions. Firstly, the plaster coat must be entirely out of the ground; it must be removed from all weatherings, where the capillary action would allow the absorption of water; the upper surfaces must be covered with zinc, or other metal; and, if it be expected to stand for many years, the whole must be painted. When, however, plaster is to be applied on walls, externally or internally, the course followed is to clear out the joints of the masonry, and to wet the surface. Plaster, guaged stiff, is laid on with a broom, or in any similar expeditious manner, and it is brought to a tolerably uniform face by use of the trowel. This is called "faire le crepi," a term equivalent to our "rendering." The floating coat, or "l'enduit," is applied by the trowel, and dressed off with a rule, in somewhat a similar manner to the system followed by our own workmen; but it is in the execution of this work that the greatest difficulty arises, from the rapidity with which the plaster sets. The stuff is guaged thin, but not sufficiently so to allow much manipulation. When the face is floated, as described, the plasterer passes over the surface with a sort of toothed trowel, called "la truelle bretelée;" using, firstly, the toothed side, to remove any asperities, and finishing with the knife edge on the other. A thin setting coat is lastly added, to stop up all the pores or inequalities. The time required to complete such plastering on wall is very short, compared with what we are accustomed to. The floating coat may be applied within four days of the rendering, under favourable conditions, and the whole work easily completed in a week.

Partitions are usually executed in a manner essentially different from our own. A sort of wood framework is made, without much complication of carpentry, by the way,—for the French very wisely prefer a wall where we too often place large trussed partitions. The French partitions rarely consist of more than upright posts, with stouter ones for doorways, and a few discharging braces or horizontal ties. The upright posts, "les poteaux," are spaced about 1 foot 4 inches apart: the door-posts are usually planed so as to form the architraves of the doors,—they are called "les poteaux d'huisserie." Upon the common quarters laths are nailed (mostly of poplar or of fir), which are from 3 inches to 4 inches wide, and spaced about 4½ inches apart. The interior is filled in with old plaster rubble or light stone, and the outer surfaces rendered as for walling. Such partitions answer admirably for the purpose of keeping out sound, and are tolerably light. From the immense quantities of plaster rubble to be met with in Paris, they are also, comparatively speaking, economical. Close lathing is very rarely executed; nor, in fact, do the oak laths used in France allow such work to be well done. Some masons in Paris use a sort of tile, cast beforehand purposely for this use, and made of plaster. This system is not so solid as the usual one of only employing rubble, for the plaster does not adhere so well to the smooth faces of the tiles, but it avoids a very considerable amount of humidity.

Ceilings are executed in several manners.—1. The space between the joists is filled in solid, with plaster, or stone rubble, carried on rather wide laths underneath: the lower surface is then rendered as a wall would be, and a bed is formed on the top to receive the tiles, or sleeper joists and flooring are added. This is said to be "hourdé plein."—2. With close lathing, as in England, "à lattis jointif."—3. The third manner, and the one most usually adopted, because it binds the joists together the most effectually, without loading them unnecessarily, consists in lathing the underside of the joists at distances of about 3½ inches from centre to centre. A species of flat centering is then placed under them, and a coat of plaster of about 1½ to 1¾ inch is laid over the laths so as to stop against the boards on either side, and between them. The plaster is brought up the sides of the joists, and worked so as to leave a hollow channel. The ceiling itself is then applied below this coat, called an "auget."—4. In the country, again, another manner is used, namely, the joists are left apparent, and only the intermediate spaces are ceiled. If the third manner could be adopted under the requisite conditions of economy, it would be very desirable, for it unites the great advantages of solidity and impermeability to sound, in which respect our newly-built houses leave so much to be desired. * *

Now the proprietors of the French quarries have lately made arrangements by which the real plaster of, and from, Paris may be obtained in London at prices below those of our English plaster. Its use will, I am personally convinced, very soon supersede the barbarous mixtures of lime and hair, and all such trumpery, we have been forced to employ hitherto in its absence. A new application of any material is, however, always exposed to many risks and failures, from ignorance of its qualities, from unskilfulness in the handling, and even from the prejudices of those employed to execute the works.

GEO. R. BURNELL.

ARCHITECTURAL PROGRESSION.

I AM not much given to writing in the public journals, and am quite unskilled in controversy, but as I have, in a hasty moment, ventured to push myself into other men's disputes, I may perhaps be excused if I add a few words, merely to avoid the risk of confusing the question I intended to elucidate.

I wish it, then, to be understood, that with me, the question is not one bearing upon *copyism*.* I am as much opposed to that, in the abstract, as any one; nor is it a question as to whether certain principles propounded by your respected correspondent in his first letter were right or wrong. I confess I had then never seen that letter, and I agree with much that it contains, while I dissent from some of its premises, and nearly all of its conclusions: nor is it a question of a personal character, such as whether, on the one hand, the Gothic revivalists are too timid and puerile in their attempts, or, on the other, whether their opponents have once been zealous and humble students of mediæval art, but, on emerging from the *state pupillari*, have thrown aside at once their zeal and their humility: such questions are of little importance.

The real question is simply this:—As we are called upon to *progress*, and admit the propriety of the call, what is to be the starting point from which our progression is to commence? I do not ask this for my own information, nor for those who hold the same opinions with myself: with us the die is cast, we have chosen our starting point, and shall now probably follow our course, whether right or wrong. I only ask it for the sake of clearing the question of difficulties which may perplex those who have yet to choose.

Your correspondent, in his first letter, has ably and clearly described the condition to which we are reduced through our forefathers having once departed from the progressive course. So far we are entirely agreed, and I am only arguing with those who admit *so much*, not with the Palinogrecians, with whom we have nothing in common. The fact, however, remains, however we may deplore it, and through it we are now left without a style of our own. We see that no progression has hitherto taken place without some groundwork to go upon, but we feel that we have none of our own, owing to our having once wandered from the direct course of progression. We hold it to be most reasonable, under such circumstances, at once to return to the old path, and in that path to progress as vigorously as we are able. I have, in my hasty letter and elsewhere, given my own reasons for such a choice, and as our opponents assume a position of conscious superiority, the least we can expect is a clear statement of *their* choice and *their* reasons. All we at present know is, that they have decided that we are wrong, but this decision will produce only perplexity unless they tell us clearly and specifically what is *right*.

If we are to progress, it is clear that we must have a common starting point, or our progression will not be in common, and can lead to no unity of result. The Gothic revivalists are the only parties who have even attempted to agree on such a point; yet we are the selected objects of the attacks of those who have, so far as we can see, made no such attempt. We may have made a very foolish choice, but so far as we can discover, our opponents have made none. They say they were once precisely where we are now; but they gave no practical proofs of it: they assert that they are now far in advance of such a position, yet we look in vain for any result of their advance. We, at the least, show our sincerity by the practical carrying out of what we urge, be our works never so puerile; but when we ask for the practical working out of what our opponents are so loud in urging, the result is absolutely *nil*,—a *perfect blank*. The revival which we press for, imperfect as it is and feebly as we have attempted it, is yet *the* great architectural fact of the age; it may be a very lamentable fact, but still it is *the* fact; while if we call for facts from our opponents, we have, as Mr. Pugin says, the "*one*" (in abundance) but "*proteros nihil*."

It is but fair that we should see the carrying out of their principles, and that the public should judge between us, not by what we *say*, but by what we *do*. Till I see something of this I shall trouble you no more on the subject, but, in the meantime, urge upon those students who are disposed to go with us not to be discouraged or perplexed by such questions, but to press earnestly forward: a glorious field lies before them. We are, in fact, but the pioneers: to them may be reserved the perfect carrying out of what we are now labouring for, though they will fail if they attempt it without first laying as a foundation, a perfect knowledge of those glorious remnants of Christian art which we select as the groundwork on which our progression is to be founded.

GEO. GILBERT SCOTT.

* I may here mention that the title given to my letter was not my own, and that I had throughout used the full name of your correspondent, instead of his initials, not having indeed seen the letter in which the initials alone were given. I only mention this to avoid apparent inconsistency.

EARLY DOCUMENTS CONCERNING WORKMEN.

REFERRING to Mr. BURLINSON'S remarks on the documents concerning Freiburg Minster in last week's BUILDER, it is suggested that the word "gesellen" is used in them in no other sense than that which it still has in the present day in Germany when applied to workmen, namely "journeymen," and that the state of society among the workmen in those days is nowise brought in question by the use of this still current expression. *Meister* Hans is duly distinguished in the documents from the "gesellen," or journeymen workmen, and he is required to attend once in each quarter at the building, viz., at the Ember-weeks, or Fronn-fasten (not Fron-fast, as printed). Under him is the parlier, or foreman, from French "parler," because, says a German work, he only has to speak on the building. Should it be the case that this word, so derived from the French, is chiefly in use among the workmen of those towns in Germany in which the mediæval masonic fraternities were settled during the erection of the Gothic buildings (so called), of that era another indication is afforded as to the country from which these societies may be supposed to have derived their principles and practice of architecture, in conformity with the deductions contained in Mr. Inkersley's work, reviewed in last week's BUILDER.

N.

ART-UNION OF LONDON.—The distribution of works of fine art will be made on Tuesday next, at Drury-lane Theatre,—the Duke of Cambridge in the chair. We shall give the report and the names of prizeholders.

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